

**REMARKS**

This reply is intended to be completely responsive to the Non-Final Office Action dated February 17, 2009.

**Status**

Claims 19-23 and 42-75 are pending.

Claims 19-23 and 42-75 are rejected.

Claims 19, 42, 52, 60 and 75 are amended.

New claim 76 has been added to provide an additional claim of varying scope.

Applicant believes that each of the rejections raised by the Examiner have been addressed and the application is in condition for allowance. Reconsideration and allowance of the application, as amended, is respectfully requested.

**Claim Rejections – 35 U.S.C. § 102**

Rejection of claims 42-48, 50, 52-56, 58-65, 67-69, 73 and 74 under 35 U.S.C. 102(e) as being anticipated by Dwyer et al.

On pages 3-4 of the Office Action, the Examiner rejected claims 42-48, 50, 52-56, 58-65, 67-69, 73 and 74 under 35 U.S.C. 102(e) as being anticipated by Dwyer et al. Applicant has amended independent claims 42, 52 and 60 to overcome the rejections based on Dwyer et al.

**Independent claim 42**

Independent claim 42, as amended, recites a “joint prosthesis system” including, among other elements, “a body having a first portion, a second portion, and a central canal, wherein the central canal extends through the second portion of the body” and “a head coupled to the first portion of the body, wherein the central canal extends through the second portion of the body at a

position such that access is permitted to an end of the central canal nearest the head when the head is coupled to the body.” Dwyer et al. does not identically disclose a prosthesis “wherein the central canal extends through the second portion of the body at a position such that access is permitted to an end of the central canal nearest the head when the head is coupled to the body,” as recited in independent claim 42.

In contrast, Dwyer et al. discloses a “modular prosthesis 100” having a “sleeve component 14,” a “stem component 18,” and a “neck component 12” having a “trunnion 26” at one end that joins “neck component 12” to “head component 16.” See col. 15, lines 63-67, col. 5, lines 48-50, col. 6, lines 31-33, and Figs. 1 and 5. The “sleeve component 14” (identified as “the body” by the Examiner) includes an “elongated bore 36” that receives both the “stem component 18” (identified as a “shaft” by the Examiner) and the “neck component 12.” Col. 6, lines 45-47. As can be seen in Fig. 5, “head component 16” is coupled to “sleeve component 14” via “neck component 12” such that “neck component 12” must be removed from “elongated bore 36” in order to allow access to the upper end of “elongated bore 36.” However, removing “neck component 12” from “elongated bore 36” results in the “head component 16” being disconnected from “sleeve component 14.” As such, Dwyer et al. does not identically disclose a prosthesis “wherein the central canal extends through the second portion of the body at a position such that access is permitted to an end of the central canal nearest the head when the head is coupled to the body,” as recited in independent claim 42.

In view of the amendment to independent claim 42 and the arguments set forth above, Applicant respectfully asserts that independent claim 42 and claims 43-51, which depend from claim 42, are not anticipated by Dwyer et al. under 35 U.S.C. § 102(e).

#### Independent claim 52 and 60

Independent claim 52, as amended, recites a “modular joint prosthesis ... wherein the shaft may be removed from the patient after implantation of the prosthesis without also removing both the body and the articular surface from the patient and without decoupling the body from the

articular surface.” Independent claim 60, as amended, recites a “modular joint prosthesis system ... wherein the second replacement shaft is used to replace the first shaft in the bone after implantation of the prosthesis into a patient without first removing both the body and the articular surface from the patient and without decoupling the articular surface from the body.”

Dwyer et al. does not identically disclose a prosthesis “wherein the shaft may be removed from the patient after implantation of the prosthesis without also removing both the body and the articular surface from the patient and without decoupling the body from the articular surface,” as recited in independent claim 52, or “wherein the second replacement shaft is used to replace the first shaft in the bone after implantation of the prosthesis into a patient without first removing both the body and the articular surface from the patient and without decoupling the articular surface from the body,” as recited in independent claim 60.

As discussed above, Dwyer et al. discloses a “modular prosthesis 100” having a “sleeve component 14,” a “stem component 18,” and a “neck component 12” having a “trunnion 26” at one end that joins “neck component 12” to “head component 16.” See col. 15, lines 63-67, col. 5, lines 48-50, col. 6, lines 31-33, and Figs. 1 and 5. The “sleeve component 14” (identified as “the body” by the Examiner) includes an “elongated bore 36” that receives both the “stem component 18” (identified as a “shaft” by the Examiner) and the “neck component 12.” Col. 6, lines 45-47. As can be seen in Fig. 5, “head component 16” is coupled to “sleeve component 14” via “neck component 12” such that “neck component 12” must be removed from “elongated bore 36” in order to allow replacement of “stem component 18.” However, removing “neck component 12” from “elongated bore 36” results in “head component 16” being disconnected from “sleeve component 14.” As such, Dwyer et al. does not identically disclose a prosthesis “wherein the shaft may be removed from the patient after implantation of the prosthesis without also removing both the body and the articular surface from the patient and without decoupling the body from the articular surface,” as recited in independent claim 52, or “wherein the second replacement shaft is used to replace the first shaft in the bone after implantation of the prosthesis

into a patient without first removing both the body and the articular surface from the patient and without decoupling the articular surface from the body,” as recited in independent claim 60.

In view of the amendments to independent claims 52 and 60 and the arguments set forth above, Applicant respectfully asserts that independent claims 52 and 60 and claims 53-59 and 61-74, which depend from claims 52 and 60 respectively, are not anticipated by Dwyer et al. under 35 U.S.C. § 102(e).

### **Claim Rejections – 35 U.S.C. § 103**

Rejection of claims 49, 51, 57, 66, and 70-72 under 35 U.S.C. 103(a) as being unpatentable over Dwyer et al.

On pages 4-5 of the Office Action, the Examiner rejected dependent claims 49, 51, 57, 66, and 70-72 under 35 U.S.C. 103(a) as being unpatentable over Dwyer et al. For the same reasons discussed above, Dwyer et al. does not disclose, teach, or suggest a prosthesis “wherein the central canal extends through the second portion of the body at a position such that access is permitted to an end of the central canal nearest the head when the head is coupled to the body,” as recited in independent claim 42, “wherein the shaft may be removed from the patient after implantation of the prosthesis without also removing both the body and the articular surface from the patient and without decoupling the body from the articular surface,” as recited in independent claim 52, or “wherein the second replacement shaft is used to replace the first shaft in the bone after implantation of the prosthesis into a patient without first removing both the body and the articular surface from the patient and without decoupling the articular surface from the body,” as recited in independent claim 60.

Accordingly, Applicant respectfully asserts that claims 49 and 51, that depend from independent claim 42, claims 57 and 66, that depend from independent claim 52, and claims 70-72, that depend from independent claim 60, are patentable over Dwyer et al. under 35 U.S.C. § 103(a).

Rejection of Claim 75 under 35 U.S.C. § 103(a) as unpatentable over Dwyer et al.

On pages 4-5 of the Office Action, the Examiner rejected independent claim 75 under 35 U.S.C. § 103(a) as unpatentable over Dwyer et al. Applicant has amended independent claim 75 to overcome the rejection based on Dwyer et al.

Independent claim 75, as amended, recites an “artificial joint system ... wherein the first shaft is removable from the central canal without removing both the body and the prosthetic head from the patient and without decoupling the prosthetic head from the body.” For the same reasons as discussed above, Dwyer et al. does not disclose, teach, or suggest a prosthesis “wherein the first shaft is removable from the central canal without removing both the body and the prosthetic head from the patient and without decoupling the prosthetic head from the body,” as recited in independent claim 75. Accordingly, Applicant respectfully asserts that claim 75 is patentable over Dwyer et al. under 35 U.S.C. § 103(a).

Rejection of claims 19-23, 42-51, 52-59, 60-74, and 75 under 35 U.S.C. 103(a) as being unpatentable over Muhlhausler et al.

On pages 5-6 of the Office Action, the Examiner rejected claims 19-23, 42-51, 52-59, 60-74 and 75 under 35 U.S.C. 103(a) as being unpatentable over Muhlhausler et al. Applicant has amended independent claims 19, 42, 52, 60 and 75 to overcome the rejection based on Muhlhausler et al.

Independent claim 19 recites a “method of replacing a shaft of a joint prosthesis having a body, a head, and a shaft after the joint prosthesis has been implanted in a patient” including, among other steps, the step of “removing the shaft from the patient without removing both the body and the head from the patient and without decoupling the head from the body.” Muhlhausler et al. does not disclose, teach, or suggest the step of “removing the shaft from the patient without removing both the body and the head from the patient and without decoupling the head from the body,” as recited in independent claim 19.

Independent claim 42, as amended, recites a “joint prosthesis system” including, among other elements, “a head coupled to the first portion of the body, wherein the central canal extends through the second portion of the body at a position such that access is permitted to an end of the central canal nearest the head when the head is coupled to the body.” Muhlhausler et al. does not disclose, teach, or suggest a prosthesis “wherein the central canal extends through the second portion of the body at a position such that access is permitted to an end of the central canal nearest the head when the head is coupled to the body,” as recited in independent claim 42.

Independent claim 52, as amended, recites a “modular joint prosthesis having an articular surface” including, in combination with other elements, “a body,” and “a shaft ... wherein the shaft may be removed from the patient after implantation of the prosthesis without also removing both the body and the articular surface from the patient and without decoupling the body from the articular surface.” Muhlhausler et al. does not disclose, teach, or suggest a prosthesis “wherein the shaft may be removed from the patient after implantation of the prosthesis without also removing both the body and the articular surface from the patient and without decoupling the body from the articular surface,” as recited in independent claim 52.

Independent claim 60, as amended, recites a “modular joint prosthesis system” including, in combination with other elements, “a body,” “an articular surface,” “a first shaft ... and a second replacement shaft ... wherein the second replacement shaft is used to replace the first shaft in the bone after implantation of the prosthesis into a patient without first removing both the body and the articular surface from the patient and without decoupling the articular surface from the body.” Muhlhausler et al. does not disclose, teach, or suggest a prosthesis “wherein the second replacement shaft is used to replace the first shaft in the bone after implantation of the prosthesis into a patient without first removing both the body and the articular surface from the patient and without decoupling the articular surface from the body,” as recited in independent claim 60.

Independent claim 75, as amended, recites an “artificial joint system” including, in combination with other elements, “a body,” “a prosthetic head,” and “a first shaft ... wherein the

first shaft is removable from the central canal without removing both the body and the prosthetic head from the patient and without decoupling the prosthetic head from the body.” Muhlhausler et al. does not disclose, teach, or suggest a prosthesis “wherein the first shaft is removable from the central canal without removing both the body and the prosthetic head from the patient and without decoupling the prosthetic head from the body,” as recited in independent claim 75.

In contrast, Muhlhausler et al. discloses a “shoulder endoprosthesis” including “a shaft 10,” “a middle section 30 fitted onto it [shaft 10],” and “a holder 32 [that] serves to secure a head 40.” Col. 3, line 66 to col. 4, line 1 and col. 4, line 5. “The middle section 30 has a through bore 34 with internal thread 35.” Col. 4, lines 8-9. “The middle section 30 with its internal thread 35 is screwed along the axis A onto the external thread 11 of the shaft 10.” Col. 4, lines 9-11. As shown in FIG. 1, once the endoprosthesis of Muhlhausler et al. is assembled, as would be the case following implantation, “head 40” blocks “through bore 34” of “middle section 30.” Thus, it appears that “shaft 10” cannot be removed without disconnecting “head 40” from “middle section 30.”

Accordingly, because Muhlhausler et al. fails to disclose, teach, or suggest all of the elements recited in independent claims 19, 42, 52, 60 and 75, as amended, Applicant respectfully asserts that claims 19-23, 42-51, 52-59, 60-74 and 75 are patentable over Muhlhausler et al. under 35 U.S.C. § 103(a).

Rejection of claims 19-23 and 42-75 under 35 U.S.C. 103(a) as being unpatentable over Muhlhausler et al. in view of Dwyer et al.

On pages 7-10 of the Office Action, the Examiner rejected claims 19-23, and 42-75 under 35 U.S.C. 103(a) as being unpatentable over Muhlhausler et al. in view of Dwyer et al. As discussed in detail above, Muhlhausler et al. and Dwyer et al. fail to disclose, teach, or suggest, at least one element of each of independent claims 19, 42, 52, 60 and 75, as amended.

On page 8 of the Office Action, the Examiner states “[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Muhlhausler et al reference by changing the oblong head with the oval head of the Dwyer et al reference in order to fit the prosthesis to an regular acetabular cup in a patient’s hip.” Whether or not this true, neither Muhlhausler et al. nor Dwyer et al. provide any teaching of the invention as claimed in independent claims 19, 42, 52, 60 and 75. Any such teaching is supplied only by Applicant’s own disclosure and relying on Applicant’s own disclosure using hindsight in making a combination of Muhlhausler et al. and Dwyer et al. is improper.

Further on page 8 of the Office Action, the Examiner states that “[t]he specification [of Muhlhausler et al.] clearly discloses that the shaft can be loosened during operation in order to adjust the shaft length or the rotation position of the shaft, therefore, if necessary the shaft is capable of being replaced if the shaft is damage.” Office Action page 8. Applicant respectfully disagrees with the Examiner’s assertion that Muhlhausler et al. teaches that “if necessary the shaft is capable of being replaced if the shaft is damage.” To the contrary, Muhlhausler et al. states that “the adjustment of the implant along the shaft axis and the rotation about it take place intraoperatively. These adjustments of the implant are carried out at the implanted shaft.” Col. 3, lines 22-27. This mode of adjustability is consistent with a joint prosthesis having “a middle section 30” that is “fitted onto” a “shaft 10.” Col. 3, line 66 to col. 4, line 1; see also, col. 4, lines 47-49. Thus, while the prosthesis of Muhlhausler et al. does appear to be adjustable, Muhlhausler et al. does not appear to disclose, teach, or suggest the removal of “shaft 10” without decoupling “middle section 30” from “head 40.”

Accordingly, Applicant respectfully asserts that claims 19-23, 42-51, 52-59, 60-74 and 75 are patentable over Muhlhausler et al. in view of Dwyer et al. under 35 U.S.C. § 103(a).



**New Claim**

Applicant has added new claim 76 to present an additional claim of varying scope. New claim 76 depends from independent claim 19 and is patentable for at least the same reasons discussed above regarding claim 19. Applicant respectfully requests allowance of new claim 76.

**Conclusion**

Claims 19-23 and 42-75 are pending in the present application. Claims 19, 42, 52, 60 and 75 are amended. Applicant believes that the present application is in condition for allowance. Favorable reconsideration of the application, as amended, is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

It should be noted that, for the sake of clarity and simplicity, Applicant's remarks have focused on the rejections of the independent claims set forth in the Office Action with the understanding that the dependent claims are patentable for at least the same reasons as the independent claims. Further, in addressing the Examiner's rejections, Applicant's remarks have set forth only some of the available arguments for patentability of the rejected claims. Applicant expressly reserves the right to argue the patentability of all claims separately and to provide new, different, and/or additional arguments for patentability not set forth herein, including, but not limited to, the failure of cited references to disclose, teach, or suggest other elements of the claims, the lack of motivation to combine cited references, or teaching away from the combination of cited references, in this or any future proceedings.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment instructions in EFS-Web being incorrect or absent, resulting in a rejected or incorrect credit card transaction, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of

papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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